CPD Occasional Paper Series

Energy Trade Issues: Canadian Experiences and Implications for Bangladesh

Paper 31

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Price Tk 30.00

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December, 2003

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The present paper titled ***Energy Trade Issues: Canadian Experiences and Implications for Bangladesh***, has been prepared under the CPD programme on **Trade Policy Analysis and Multilateral Trading System**. This programme aims at strengthening institutional capacity in Bangladesh in the area of trade policy analysis, negotiations and implementation. The programme, inter alia, seeks to project the civil society's perspectives on the emerging issues emanating from the process of globalization and liberalization. The outputs of the programme will be available to all stakeholder groups including the government and policymakers, entrepreneurs and business leaders, and trade and development partners.

This paper has been prepared jointly by *Mr Wenguo Cai,* Programme Director (Asia-Pacific) and *Ms Sarah Geddes*, Project/Research Officer, Centre for Trade Policy and Law, Carleton University, Ottawa, Canada.

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Energy Trade Issues: Canadian Experiences and Implications for Bangladesh

1. Introduction

Of all tradable goods and services, those in the energy sector have been most highly regulated, politicized and disputed due to the fact that energy is essential to economic development and social progress in all countries. The discovery of substantial reserves of natural gas in Bangladesh within the past decade has resulted in debate over what the country could achieve through the successful development of this valuable resource. It has also resulted in a contentious debate surrounding the optimal use of energy resources and the elements necessary for a sound energy policy. Areas of concern include the involvement of international oil companies in exploration and the enlargement of the natural gas industry, domestic energy security, investment, and the development of regional cooperation in energy trade.

Historically, Canada has dealt with very similar issues concerning the exploration and use of energy resources. Canada's energy policy has undergone dramatic changes over the past four decades. From the 1970s to the early 1980s, the goal of Canada's energy policy was to achieve energy security and self-sufficiency in the face of perceived resource scarcity and rising energy prices. However, the late 1980s saw a shift to a more market-oriented energy policy through extensive deregulation. Today, Canada is the world's third-largest natural gas producer after the United States and Russia. Natural gas production has increased sharply over the past decade and as a result of the North America Free Trade Agreement (NAFTA), Canada is now a part of an integrated North American market, including the energy sector.

Through an examination of Canada's experience in developing its energy sector, this paper identifies areas of common interest for Bangladesh in terms of energy use and energy trade. The first section outlines general principles and provisions applicable to energy trade under the World Trade Organization (WTO), and examines how issues of energy security and regional cooperation are dealt with in NAFTA. The second section provides an overview of Canada's transition from a highly regulated energy regime to the implementation of deregulation and liberalization of trade and investment and its impact on the natural gas industry. The third section focuses on the role of institutions in the regulation of Canada's energy sector. The final section examines what lessons may

be drawn for Bangladesh from the Canadian experience of the development and regulation of the energy sector.

2. Energy-Related Provisions: WTO and NAFTA

2.1 Governing Regulations in the WTO

In the early days of the GATT, rules applying to the energy industry were not raised as an issue of debate. This was because most petroleum exporting countries were not parties to the GATT and also because energy was traditionally considered an industry of too much strategic and economic importance to be liberalized. This outlook changed after the oil shock of the 1970s highlighted the dependence many countries had on foreign supplies of energy. As a number of petroleum producing countries acceded to the GATT during the Uruguay Round, multilateral rules relating to trade in energy have gained greater importance and energy has come to be treated more like any other commodity. There is still very little in the WTO agreements referring *specifically* to the energy sector, but the sector is subject to certain basic provisions. The most relevant of these provisions are outlined below.

2.1.1 Subsidies

One of the most important issues concerning energy trade under the WTO is the use of subsidies. The Agreement on Subsidies and Countervailing Measures (ASCM) identifies subsidies as "prohibited" (all export subsidies), "actionable" (subject to the WTO dispute settlement mechanism), and "non-actionable" (permitted). A difference is made between subsidies that are generally available throughout the economy, and subsidies that are "specific" to a limited number of firms or industries. Therefore, if energy is provided to all domestic consumers at prices below those in the international market, it can be argued that the subsidy is not "specific" and is not "actionable."

However, the ASCM clarifies in article 2.1(c), that: "If notwithstanding any appearance of non-specificity . . . there are reasons to believe that the subsidy may in fact be specific, other factors may be considered." This approach reflects the position of the United States International Trade Commission, which makes a distinction between a generalized benefit such as national defence, and a generally available subsidy that may hold more benefit for a specific group of individuals.[1]

[1] UNCTAD 2000, p. 32.

In the OECD countries, subsidies have usually taken the form of producer subsidies aimed at encouraging energy production and protecting domestic industries and employment by holding energy prices above the world price level.[2] Subsidy use in non-OECD countries has typically been geared towards keeping domestic energy prices below the world price in order to provide easier access to energy for domestic consumers and low-income groups. For developing countries, this practice ensures greater domestic access to basic natural resources, which can increase investment and promote industrialization and the development of infrastructure. It may also increase competitiveness in the industrial sector.[3] However, studies by the International Energy Agency (IEA) and the World Bank indicate that heavy consumer subsidies have generally been unsuccessful in improving social welfare and instead contribute to inefficient energy use and negative environmental impacts.[4]

2.1.2 Dual-pricing

Through the practice of dual-pricing, governments keep domestic prices lower (or export prices higher) than they would be if determined by market forces. Dual-pricing itself is not inconsistent with WTO rules, but problems arise concerning the methods used to achieve dual-pricing, which include export restrictions, export duties or taxes and government provision of low-cost energy inputs. Some countries have argued that export restrictions or taxes have the effect of a subsidy to domestic producers and exporters of manufactured goods because it provides them with access to cheaper inputs. Developing countries argue that the use of export restrictions or other measures is consistent with the exceptions found in GATT articles XI:2(a), XX (g) and XX (j), which provide for the use of export restrictions in the event of critical shortages, conservation measures, or development purposes. Countries that are dependent on foreign sources of energy have sought to limit dual-pricing practices, which are viewed as inhibiting competition. Therefore, dual-pricing practices may be subject to further clarification in future negotiations.

2.1.3 Quantitative Restrictions

Article XI of the GATT prohibits quantitative restrictions for both exports and imports, preventing governments from limiting the volume of trade by any means other than the

[2] WTO, WT/CTE/W/2000, para. 33.
[3] UNCTAD 2000, p. 2.
[4] WTO, WT/CTE/W/2000, para. 48.

use of duties, taxes or other charges. However, this is subject to certain exceptions. In particular, Article XI:2(a) permits export restrictions to relieve critical shortages of essential products. Other exceptions are found under Article XX.

2.1.4 Article XX (General Exceptions)

A number of exceptions in Article XX have relevance to the petroleum industry. Article XX (b) permits measures "necessary" to protect human, animal or plant life or health. As a result, this provision has attracted intense interest from environmentalists in recent years. "Necessary" has been interpreted by GATT panels as meaning that there is no less trade-restrictive trade measure that could be used to achieve the same effect. Article XX (g) provides for measures "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption," while Article XX (i) and (j) refer to situations when quantities of the good are necessary for a domestic processing industry or to satisfy a general or local short supply. The degree of flexibility that this provision actually allows WTO members in controlling exports of natural resources remains unclear particularly in light of the reference to domestic supply restrictions. In a dispute, the burden of proof is on the party invoking the provision. GATT Article XIII also outlines that any trade restrictions must be non-discriminatory and must preserve the distribution of trade.

Article XX (h) provides for measures "undertaken in pursuance of obligations under any intergovernmental commodity agreement which conforms to criteria submitted to the CONTRACTING PARTIES and not disapproved by them or which is itself so submitted and not so disapproved." OPEC members might rely on this article as an intergovernmental commodity arrangement. However, it is unlikely that other WTO members would approve of the arrangement.

2.1.5 National Security

Energy has traditionally been viewed as being of strategic importance. Therefore, another relevant exception in the GATT is the national security exception found in Article XXI. The Article reads as follows:

> Nothing in this Agreement shall be construed
>
> a) to require any contracting party to furnish any information the disclosure of which it considers contrary to its essential interests; or
>
> b) to prevent any contracting party from taking any action which it considers necessary for the protection of its essential security interests

> i) relating to fissionable materials or the materials from which they are derived;
> ii)relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment;
> iii) taken in time of war or other emergency in international relations; or
>
> c) to prevent any contracting party from taken any action in pursuance of its obligations under the United Nations Charter for the maintenance of international peace and security.

This article is understood to justify export restrictions of petroleum under the necessary circumstances. In the past the phrase, "essential security interests" has been interpreted fairly broadly.[5]

2.1.6 Anti-dumping

According to the Agreement on Implementation of article VI of GATT 1994 "a product is to be considered as being dumped, (i.e. introduced into the commerce of another country at less than its normal value), if the export price of the product exported from one country to another is less than the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the exporting country."[6] Exporters of petroleum products, especially those with higher value added, such as petrochemicals need to pay particular attention to the threat of anti-dumping measures. The imposition of anti-dumping duties is easier when sales of the product in the domestic market account for less than 5% of exports of the product to the country concerned. A number of anti-dumping measures affecting the petrochemical sector have been documented in the WTO.

2.1.7 Services

Until recently most countries' energy sectors were vertically integrated and state-controlled utilities that both produced and delivered the energy commodity. This meant that differentiating energy goods from energy services was a complicated process. However, deregulation of the sector in many countries has led to the break down of activities and more clearly defined categories for goods and services.[7] Energy goods are usually considered to be the fuel itself. The WTO "Services Sectoral Classification List" (MTN.GNS/W.120) does not provide a complete, separate entry for energy services, but

[5] UNCTAD 2000, p. 30.
[6] UNCTAD 2000, p. 36.
[7] WTO, S/C/W/52, p. 2.

some services such as transport, distribution, construction, consulting, engineering, etc., fall under horizontal categories. At present, few GATS commitments have been made in energy services. Canada has made commitments in relation to general construction work and civil engineering for power facilities and pipelines, and site preparation for mining.[8]

Various proposals have been submitted for the inclusion of energy services in future negotiations and the clarification of the classification list.[9] These proposals stress that negotiations under the GATS should not include issues of resource ownership or rights of access and use of resources. Developing countries, such as Cuba and Venezuela have emphasized the need for the development of domestic capacities through greater access to new technologies and the promotion of sustainable development. All proposals have also indicated that increased market access in energy services does not necessarily mean deregulation of the sector. The proposals assert the right of members to maintain regulatory frameworks consistent with public policy considerations. For developing countries, this flexibility would be inline with GATS Articles IV and XIX that include provisions aimed at increasing the participation of developing countries in trade in services. The Articles read in relevant parts:

> **Article 1:1** The increasing participation of developing country Members in world trade shall be facilitated through negotiated specific commitments, by differentMembers pursuant to Parts III and IV of the Agreement, relating to:
>
> a) the strengthening of their domestic services capacity and its efficiency and competitiveness, inter alia through access to technology on a commercial basis;
> b) the improvement of their access to distribution channels and information networks; and
> c) the liberalization of market access in sectors and modes of supply of export interest to them.
>
> **Article XIX:2**: The process of liberalization shall take place with due respect for national policy objectives and the level of development of individual Members, both overall and in individual sectors. There shall be appropriate flexibility for individual developing country members for opening fewer sectors, liberalizing fewer types of transactions, progressively extending market access in line with their development situation and, when making access to their markets available to foreign

[8] Ibid., p. 30.
[9] WTO, Communication from Cuba S/CSS/W/144; Communication from Venezuela S/CSS/W/69; Communication from the European Communities and their Member States S/CSS/W/60; Communication from the United States S/CSS/W/24; Communication from Canada S/CSS/W/58.

> service suppliers, attaching to such access conditions aimed at achieving the objectives referred to in Article IV.

Some Members argue that liberalization in energy services by developing countries could be linked to transfer of technology and access to energy networks by developed country services suppliers, and thereby providing an effective means for implementing Articles IV and XIX.[10]

Proposals submitted by the US, Canada, the EC and Japan identify current barriers to energy services including restrictions on foreign investment, unclear licensing requirements and approval processes, economic needs tests, nationality requirements, restrictions on the entry of service providers and service equipment. Interestingly, Canada has submitted a proposal stating that all services in the oil and gas sector can be found in the "Services Sectoral Classification List" and there is no need for a separate category for these sectors. In the proposal, Canada encourages WTO Members to increase commitments for the provision oil and gas, arguing that increased market access in these sectors will result in increased innovation, efficiency, use of environmentally friendly technology, development of work force skills and management methods and investment in technology.[11]

2.2 NAFTA's Energy Chapter

Access to the American energy market has historically been very important for the development of the Canadian energy industry. Domestic customers can be supplied more efficiently by utilizing transmission channels that simultaneously export to the US. Natural gas from the Prairie Provinces can be transported more efficiently to the North Central states, and Eastern Canada can gain a cheaper supply by importing from geographically close US suppliers. The provisions of NAFTA guarantee a secure supply of energy to US consumers while maintaining open access for Canadian energy products to the US market, resulting in "energy interdependence."[12] Canada has a major share in the US natural gas market with 50% in the West, 27% in the Midwest and 24% in the Northeast.[13] Canada and the United States are now considered to comprise a single energy market.

[10] UNCTAD 2003, p. 6.
[11] WTO, Communication from Canada S/CSS/W/58.
[12] Dukert, p. 350.
[13] IEA 2000, p. 112.

NAFTA's Chapter Six applies to energy and basic petrochemicals and extends beyond the treatment of energy solely as a commodity to incorporate both energy-related investment and cross-border trade in services.[14] The energy sector is therefore also subject to certain provisions outlined in Chapter Ten on investment, and Chapter Twelve on trade in services. On the whole, NAFTA treats energy in a similar manner to any other commodity, applying the GATT principles of national treatment and MFN.

2.2.1 Dual-Pricing and Quantitative Restrictions

In some cases NAFTA interprets GATT rules in a stricter manner, limiting the ability of Parties to resort to dual-pricing and certain GATT exceptions that have commonly been applied to the energy industry. An example of this is found in Article 603(2), which prohibits minimum or maximum export-price requirements in circumstances where quantitative restrictions would be prohibited. The Article reads as follows:

> The Parties understand that the provisions of the GATT incorporated into paragraph 1 prohibit, in any circumstances in which any other form of quantitative restriction is prohibited, minimum or maximum export-price requirements and, except as permitted in enforcement or countervailing and antidumping orders and undertakings, minimum or maximum import-price requirements.

It has been argued that this interpretation is not actually consistent with GATT practice, and that Canada and Mexico have both imposed export-price requirements in the past. [15] If WTO members adhered to the NAFTA interpretation, it would limit the ability of petroleum producing countries to use dual-pricing as a means to encourage domestic diversification in the petroleum sector. This provision along with Article 604, which prohibits the introduction of discriminatory export taxes, duties or charges, are examples of attempts to restrain the use of protectionist price-controls. However, Plourde argues that the agreement does not prohibit the Canadian government from introducing price controls, provided that they are not in the form of minimum export prices and do not favour domestic consumers over foreign consumers.[16]

[14] Because the Mexican government is granted ownership of petroleum in its constitution and controls reserves and the rights to exploration, development, production and marketing, it has listed many exemptions from the energy chapter. The discussion in this section pertains to the provisions that apply to Canada-US trade.
[15] UNCTAD 2000, p. 66.
[16] Plourde, p. 16.

2.2.2 Security of Energy Supply

NAFTA ensures secure access to energy supplies by limiting the use of certain exceptions under the GATT. In particular, it limits the use of GATT XI:2(a), dealing with critical shortages; XX(g), (i) and (j) which deal with the conservation of natural resources and maintaining ready domestic access to supply. NAFTA Article 605 (a) stipulates that any restriction of supply must "not reduce the proportion of the total export shipments of the energy good made available to the other Party relative to the total supply of that good of the Party maintaining the restriction." Thus, NAFTA takes the requirement for export restraints further than the GATT provisions by requiring that they must be relative in proportion to the importing country. The proportion of exports to domestic supply must be determined by the average proportion in the 36 months preceding the restriction. Furthermore, the restriction must not disrupt the normal channels of supply or the normal proportions among energy goods.

2.2.3 Security Exceptions

NAFTA also limits member countries' resort to the security exceptions of GATT XXI. Article 607 elaborates that such restrictions may only be imposed "to supply a military establishment . . . or enable fulfilment of a critical defence contract" or to "respond to a situation of armed conflict." While interpretation of the security exception among WTO members has traditionally been quite broad, NAFTA narrows this significantly.

2.2.4 Dispute Settlement

Other provisions of NAFTA are also of importance to the energy sector. To protect states from unsubstantiated anti-dumping and countervailing duty measures, the mechanism for a supranational tribunal has been established under NAFTA. The tribunal restrains the ability of parties to the agreement to apply biased application of domestic laws relating to dumping and subsidies.[17] The establishment of the tribunal has been beneficial to Canada, which has often had to defend itself against US actions.

2.2.5 Investment

Guided by the principles of national treatment and MFN, provisions on investment prohibit a number of performance requirements, minimum domestic ownership requirements and expropriation or the nationalizing of investments without

[17] UNCTAD 2000, p. 69.

compensation. Canada has listed oil and gas as exempt from the obligations of minimum domestic ownership and performance requirements, although such requirements must not be more restrictive than those in effect on October 4, 1987 (when the CUFTA was negotiated).

2.2.6 Services

NAFTA's Chapter Twelve on cross-border trade in non-financial services also applies the principles of national treatment and MFN. However, measures existing prior to the agreement are maintained (grandfathered) by their inclusion in each party's schedule to Annex I of NAFTA. Chapter Twelve does not apply to government procurement due to the fact that the Mexican energy sector is a state monopoly.

2.2.7 Environment

While there is no specific chapter in NAFTA relating to trade and the environment, provisions throughout the agreement make reference to the promotion of sustainable development and the ability of parties to maintain environmental obligations. NAFTA also provides that in the case of a dispute between trade rules and an international environmental agreement, the latter will take precedence. This is an important provision considering the current debate over implementation of the Kyoto Protocol. The North American Agreement on Environmental Cooperation (NAAEC) evolved as a side agreement to NAFTA for dealing with trade-related environmental issues. The NAAEC will be discussed in further detail in Section Three.

3. Canada's Natural Gas Industry: From NEP to NAFTA

Energy is of particular importance for Canada as a country covering a vast geographic region that experiences sub-zero temperatures in the winter months. Differences in resource endowments between regions, and the relationship between the federal and provincial governments have played significant roles in the shaping of Canada's energy policy and regulations. Between 1945 and 1973 both levels of government and the industry agreed on the need for growth and expansion of the oil and gas industry. The period was characterized by minimal government interference and focused on the construction of pipelines linking the producing Prairie Provinces with other regions of Canada and the United States. The most contentious debate surrounded the designation of pipeline routes and foreign ownership. In the early stages, concerns were expressed

that a pipeline route going through the United States could result in US interference in the Canadian market, subjecting Canada to pressure for excessive exports.[18]

On the other hand, geographical barriers made the building of an "all-Canadian" pipeline extremely costly and economically inefficient. By building a pipeline that simultaneously supplied US and Canadian markets, Canada could take advantage of economies of scale, reducing the costs of oil and gas for the domestic consumer. In the end, the system of pipelines that formed can be called "quasi-national or a semi-continental pattern of fuel transportation and distribution,"[19] with some pipelines serving both markets, and others directed solely to Canadian consumers. Although private and political interests did influence policy during this period, there was a general consensus between the provincial provinces, the federal government and the US government that a more integrated market would be more economic and beneficial for all parties.[20]

The 1973 energy crises created by OPEC dramatically changed the direction of Canadian energy policy in the years following. The escalating price of oil, both internationally and domestically, increased the stakes for industry, government and consumers alike, and struggles ensued over pricing and revenue sharing. Industry, dominated by foreign owned companies, had traditionally held a relatively powerful position due to its role as the primary source for technological and geological information, and its large capital investments in exploration and production.[21] To respond to this and to secure energy supply for eastern Canada, the federal government established Petro-Canada as a state-owned company. A policy of "Canadian reserves for Canadians" was adopted, prohibiting additional exports of natural gas to the United States. An export surplus test was administered requiring a reserve of natural gas equivalent to 25 years of projected domestic consumption to remain in Canada.[22] The 1973 energy crises, and the subsequent shock caused by the Iranian Revolution in 1979 resulted in the perception that prices for oil and gas would continue to rise in the face of continued shortage of supply, spurring heavy government regulation of the energy market.

[18] Doern and Toner, p. 70.
[19] John McDougall, cited in Doern and Toner, p. 71.
[20] Doern and Toner, 455.
[21] Ibid., p. 456.
[22] Robert N. McRae, p. 85.

In 1980 the National Energy Program (NEP) was introduced by the Federal Liberal Government of Canada. The NEP was very controversial, involving power struggles between different regions, policy areas, stakeholders and political leaders. The NEP adopted the following three official goals:

- To establish the basis for Canadians to seize control of their own energy future through *security* and ultimate independence from the world market;
- To offer to Canadians, all Canadians, the real *opportunity* to participate in the energy industry in general and the petroleum industry in particular; and
- To share in the benefits of industry expansion; to establish a petroleum pricing and revenue-sharing regime that recognizes the requirement of *fairness* to all Canadians no matter where they live.[23]

The expected outcomes of these goals were self-sufficiency in oil by 1990, 50 percent Canadian ownership and control in the industry by 1990, and made-in Canada prices with large shares of oil and gas revenues returning to the federal government. Energy security would be achieved by reducing consumption of energy, encouraging conservation and promoting the use of alternative, sustainable energy sources. On the other hand, the government intended to encourage petroleum exploration and production by providing funding in the form of grants as incentives. *Canadianization* was encouraged by Petroleum Incentive Payments, which were granted to firms based on percentages of Canadian ownership. The Canadian Ownership Special Charge (COSC) was levied on consumers to subsidize the expansion of Petro-Canada and Canadian take-overs of other foreign firms. Use of Canadian goods and services was required for both production and exploration. Any development on federally owned land, regardless of the developing firm or the date of its start of operations, was subject to a 25% Crown interest. Government regulated pricing mechanisms and taxes would achieve fairness. The price of natural gas was tied to the low domestic price of oil.

The NEP met with a great deal of opposition from the United States. The newly elected Reagan Administration viewed the Canadianization element of the NEP as a blatant violation of the principle of national treatment under the General Agreement on Tariffs and Trade (GATT). The retroactive 25 percent Crown interest was considered to be a

[23] Energy, Mines and Resources Canada, p. 2.

form of expropriation. The US argued that the low level of domestic Canadian prices was effectively a subsidy and would be counter-productive to Canada's goal of self-sufficiency.[24] Having obtained a high presence in the Canadian energy industry, US firms had a hostile reaction to the increasing number of take-overs by Canadian firms. This was exacerbated by Canada's Foreign Investment Review Agency (FIRA), which was responsible for approving all foreign takeovers of Canadian companies and limited the ability of the American firms to make counteroffers to the smaller Canadian firms.[25] Planned expenditures for further exploration and development were reduced. The US campaigned against the policy bilaterally as well as through relevant organizations such as the GATT, OECD and the International Energy Agency and voiced its intentions to take retaliatory actions.

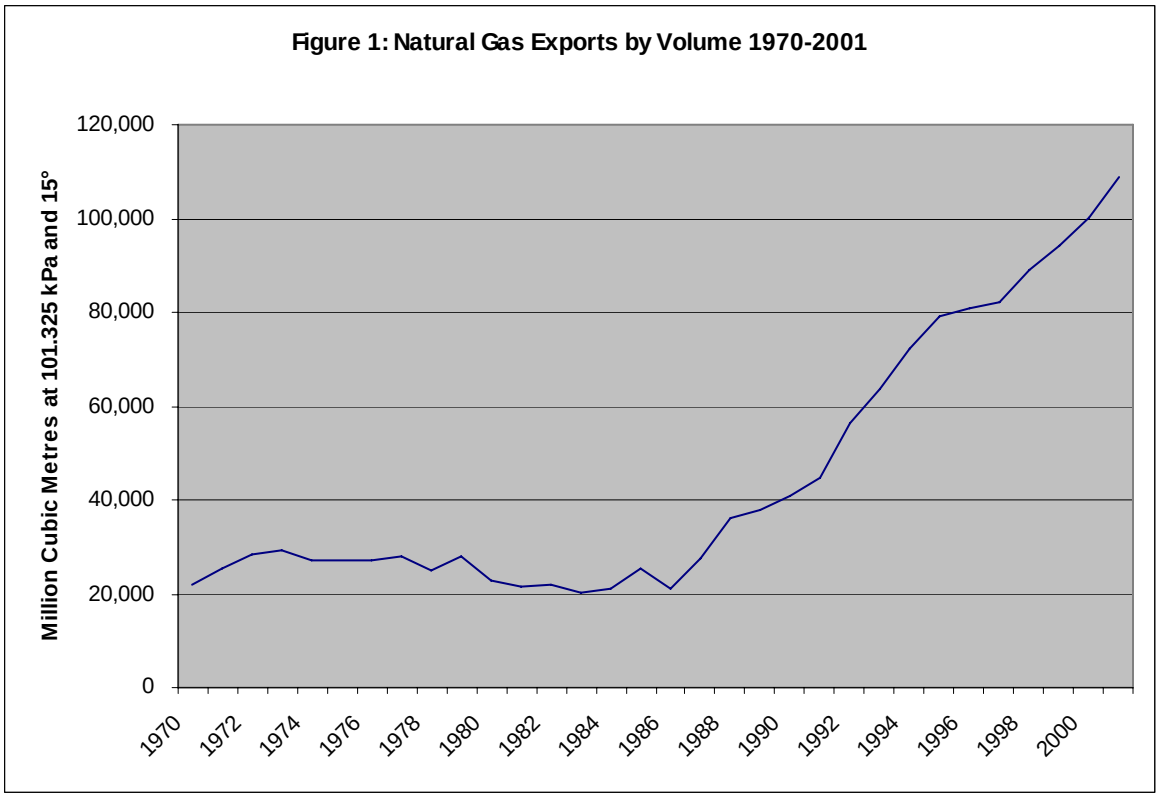
Between 1981 and 1984 some adjustments were made to aspects of the NEP in order to please stakeholders, but the changes were not substantial enough to satisfy the US. The NEP also faced difficulties in adjusting to changes in the international energy market, such as falling oil prices, the 1981 deregulation of oil markets in the US, and a "gas bubble" that created a surplus in the US market. Because the policy had been devised on the assumption that the world price of oil would continue to rise, these factors combined to make Canada's export price for natural gas artificially high resulting in a drop in demand and pushing Canada's exports down below authorized levels.[26]

The Conservative Party Government that was elected in 1984 introduced a free trade agenda and quickly announced the end of the NEP. The deregulation process in the energy industry abolished price controls and special taxes, and eliminated the 25-year reserve requirement.[27] However, the immediate effect of deregulation on the natural gas industry was not positive. In 1986, the world price of oil declined which lowered the price of natural gas as a fuel substitute. The elimination of the 25-year reserve requirement created a surplus in Canada, which, along with the US gas surplus, further lowered the price. These effects are illustrated in Figures 1 and 2. Although sales of natural gas expanded, it was not enough to offset the decline in price, resulting in lay-

[24] David Leyton-Brown, p. 302.
[25] Ibid., p. 304.
[26] McRae, p. 86.
[27] However, due to the division of power among federal and provincial governments in Canada, provinces may maintain their own requirements regarding the energy sector. For example, the Alberta Energy and Utilities Board requires that there be a 15 year supply of natural gas available for its residents.

offs of personnel and cuts to exploration and development budgets.[28] However, since 1993, the excess natural gas supply has dissipated and the industry has begun to expand again.

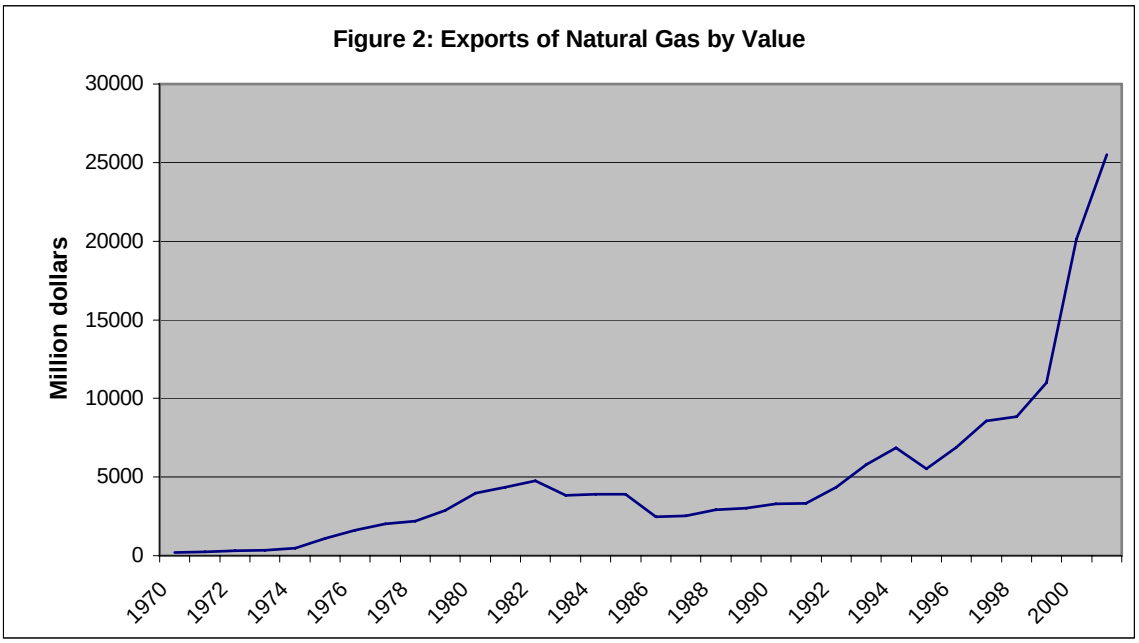
Figure 1 illustrates the dramatic increase that has taken place in the volume of Canada's exports of natural gas, while Figure 2 illustrates the increase of exports in terms of value.



Source: *Statistics Canada*

Today, Canada is the 3rd largest natural gas producer in the world, behind the United States and Russia. There are over 1000 gas producers in the industry, ranging from large oil and gas multi-national enterprises to small local firms with the largest 100 companies involved in about 85% of production.[29]

[28] Ibid., p. 88.
[29] IEA 2000, p. 107.



Source: *Statistics Canada*

Pipelines are privately owned and operated with 16 pipeline interconnections between the US and Canada. The market determines development of the industry. As demand for natural gas is forecast to continue increasing, these interconnections will likely increase in the next few years. Storage facilities both upstream and downstream decrease the effect of production disruptions or demand fluctuations caused by seasonal changes. Sixteen local utilities have a regulated monopoly in distribution, 14 of which are privately owned, however, the National Energy Board ensures equal access to distribution grids. Since the sector went through the process of unbundling, no company remains fully integrated from production to distribution although there are subsidiary upstream and downstream linkages.

Because the gas industry was deregulated before the signing of the Canada-US Free Trade Agreement (CUFTA), the agreement itself did not make any significant changes to Canada's energy policy. However, because it institutionalized a liberalized continental market it constrained the ability of future governments to re-introduce a heavily regulated policy like the NEP. As a result, confidence in a stable energy policy has secured a large natural gas market in the United States and encouraged investment in the expansion and development of new gas mega-projects.[30] The energy chapter in NAFTA is largely a duplicate of the CUFTA energy provisions, which was intended to have a GATT-plus approach.

[30] Mac Laren, p. 149.

4. Institutions and Regulations in Canada's Natural Gas Sector

4.1 National Energy Board

While trade in Canadian energy products has been liberalized a great deal since the 1980s, some important institutions maintain a strong role in regulating the Canadian energy market. The most important of these is the National Energy Board (NEB), which regulates the export of oil, gas and electricity as well as interprovincial and international pipelines and transmission lines. The NEB must approve projects for pipeline construction through a series of public hearings, taking into consideration the economic, technical and financial feasibility of the project as well as the environmental and socio-economic impacts. Furthermore, the Canadian Environmental Assessment Act (CEAA) details the requirements that must be met by all projects involving federal government departments and agencies.

Natural gas commodity prices are unregulated in Canada, and are therefore determined by supply and demand. However, pipeline transportation costs are regulated to ensure that tolls are "just and reasonable and that there is no undue discrimination in services."[31] The NEB promotes negotiated settlements between pipeline companies and shippers, providing the opportunity for appeal if the negotiation fails. Applications for export and import licenses are also administered by the NEB and are determined by the Market-Based Procedure (MBP), which is established through analysis of supply, demand and pipeline capacity. The basic premise of the MBP is that markets will work to satisfy Canadian requirements at fair prices provided that the markets remain competitive.[32]

Therefore, the NEB ensures that Canadian natural gas buyers have the opportunity to purchase supplies on similar conditions as exporters. The NEB is also responsible for regularly reviewing the outlook for the Canadian supply of major energy commodities as well as the domestic and foreign demand for Canadian energy sources. The energy outlook is determined by a review of Canadian reserves and resources, supply costs and demand and deliverability in the Canadian and US market.

[31] The National Energy Board, www.neb.gc.ca/energy/ngprice_e.htm.
[32] IEA, 2000, p. 111.

4.2 Energy Supplies Emergency Act

The Energy Supplies Emergency Act (ESEA) authorizes the Energy Supplies Allocation Board to take action in the event of a declared emergency resulting in the shortage of petroleum supplies or market disturbances that negatively affect national welfare and security and economic stability. The Board may also make adjustments to regulations controlling the emission of sulphur compounds. Presumably, any actions taken by the Board would be subject to NAFTA provisions stipulating that measures affect domestic and foreign consumers in a proportional manner.

4.3 Energy Efficiency Act

The Energy Efficiency Act (EEA) requires that energy-using products manufactured in Canada or imported from abroad meet minimum standards of efficiency. The Government of Canada enforces regulations on energy-performance levels, energy labelling and the collection of statistics and information on energy use and alternative energy sources.[33]

4.4 International Institutions

Canada also cooperates in international institutions to fulfill its objectives of domestic economic and market reform, increasing Canadian access to foreign markets and promoting technology development and policies of sustainable development.[34] Through these institutions, Canada participates in the sharing of information and data to promote understanding of the global energy market in all countries. As a member of the APEC Energy Working Groups, Canada works towards strengthening the security and reliability of affordable energy among APEC members and developing clean and efficient technology. Through the use of non-binding, voluntary agreements, APEC's Energy Security Initiative aims to implement policies enabling member countries to respond to temporary energy disruptions. Similarly, the International Energy Agency, an organization linked to the OECD, strives to achieve the coordination of members' energy policies, information sharing and energy security.

4.5 Environment

An important part of Canada's energy policy pertains to the promotion of sustainable development. The Government of Canada holds the view that "economic growth

[33] Energy 2000, chapter 5.
[34] Energy 2000, chapter 5.

provides the conditions in which protection of the environment can best be achieved and environmental protection balanced with other human goals is necessary to achieve growth that is sustainable."[35] In fact, all three NAFTA member countries have developed energy policies that focus on encouraging the use natural gas as opposed to fuels that burn less cleanly and produce more carbon dioxide. The North American Agreement on Environmental Cooperation, considered as a side agreement to the NAFTA, provides a framework to conserve, protect and enhance the environment through cooperation in policy development and the enforcement of environmental regulations. The only binding obligation of the agreement is that each country must actively enforce its own environmental laws. Failure to do so may give rise to a formal complaint from one of the other parties and the case will be heard before a dispute settlement panel. Due to the discrepancy of environmental standards between the member countries, complete harmonization was not considered a practical method for dealing with this issue. Non-governmental organizations are playing an increasing role in ensuring that NAFTA countries' environmental policies are enforced. Although the NAAEC does not provide any enforcement mechanism beyond this, it can be considered important as providing a broad framework for the evolution of regional environmental norms.[36]

Currently, Canada faces the challenge of reducing green-house gas (GHG) producing emissions. Canada is a party to the UN Framework Convention on Climate Change and a signatory to the 1997 Kyoto Protocol. Despite much controversy among domestic industries and governments, Canada ratified the Kyoto Protocol in December 2002. Under this agreement, Canada is required to reduce GHG emissions to 6% below the 1990 level by 2008~2012. Of Canada's GHG emissions, 90% are associated with the energy industry. Among the OECD countries, Canada is the third largest per capita producer of GHGs (behind the United States and Luxembourg). While achieving the goals set out in the Kyoto Protocol will be of benefit to the global environment, implementation will entail great financial costs. Canada's options for implementation may also be limited by the fact that the United States will not become a party to this agreement. Therefore, in fulfilling its commitments to the Kyoto Protocol, Canada needs to ensure that the measures taken, such as the provision of fiscal incentives, are not in

[35] Energy 2000, chapter 1.
[36] Trebilcock and Howse, p. 437.

conflict with the NAFTA. Nonetheless, since the mid 1990s, Canada has undertaken polices to reduce GHG emissions. These include investment in the development of environmentally friendly technologies, public awareness campaigns, and analysis and research on climate change. Canadian companies are also encouraged to undertake voluntary measures to reduce GHGs emissions. These voluntary actions are supported by market incentives of savings in energy costs and increased capacity to develop and market leading edge environmentally friendly technologies.[37]

5. Policy Implications for Bangladesh

Natural gas reserves were discovered in Bangladesh in the early 1990s. The estimates of proved natural gas reserves are approximately 32.1 trillion cubic feet (Tcf) with recoverable reserves estimated between 13 to 25 Tcf.[38] It is predicted that there are reserves adequate to cover a minimum of 30 years of domestic demand at the current consumption rate. It is also believed that more reserves will be discovered once production is increased. With this abundant resource, Bangladesh could become a major producer and exporter of natural gas. However, the export of natural gas has been an extremely controversial issue as many Bangladeshi feel that the resource should first be used to satisfy much needed domestic fuel demands in areas such as electric power generation, fertilizer production and transportation. It is argued that using natural gas to meet these needs will enhance Bangladesh's overall development. In addition, because natural gas is not easily transportable, the bulk of Bangladesh's export market would be in India. In the past, political relations with India have been tense, and many in Bangladesh are concerned that allowing gas exports to India would jeopardize future energy security. Many people in Bangladesh believe that proven reserves should confirm the existence of 50 years of domestic demand before exports are permitted.

As noted in the WTO Bangladesh trade policy review of 2000, most foreign direct investment has been directed at the power sector since the 1990s. While this could be beneficial in terms of increased technology transfer and development of energy infrastructure, under the current regulatory structure it may entail great risks.[39] Until recently, the industry was dominated by Petrobangla, a state-owned gas and oil company. Petrobangla participated in natural gas production and at the same time was also

[37] IEA 2000, p. 52.
[38] EIA, CSIS 2000.
[39] WTO, WT/TPR/M/68, para. 18.

responsible for policymaking and regulations. A few international oil companies (IOCs) negotiated entry with Petrobangla to participate in natural gas exploration and production. This process involved the use of production sharing agreements, whereby Petrobangla is the sole purchaser of natural gas and the sole provider of transmission and distribution services. As a result of these agreements, Petrobangla is obligated to pay the IOCs in foreign exchange at a price based on world energy prices. In turn, domestic consumers are supplied with gas on a subsidized, fixed-rate government price. It will therefore become increasingly difficult for the government of Bangladesh to ensure the IOCs receive payment, because under the current arrangement, Bangladesh would need 8-10% annual export growth to meet these obligations without drawing from its foreign exchange reserves.[40] The practice of dual-pricing and its consistency with WTO rules also remains unclear.

However, in early 2003, the government of Bangladesh announced plans to create the Bangladesh Energy Regulatory Commission (BERC) by July 2003.[41] Made up of professionals from both the public and private sectors, BERC will be responsible for the issue of licenses, fixing prices and overseeing the whole energy sector. BERC is intended to provide a more transparent and efficient method for dealing with foreign investors in the energy sector, in the hopes that this will encourage further exploration, development and production. It is a part the first phase in privatization of the energy sector in Bangladesh along with plans to give full autonomy to subsidiary companies of Petrobangla.

These issues bear a striking resemblance to the Canadian experience where energy security and foreign investment were also of great concern. The examination of Canada's energy policy demonstrates that achieving energy security by restraining exports and subsidizing domestic prices was an inefficient alternative. Canada's energy infrastructure was developed in a relatively unregulated market (pre-1970s), and growth has increased dramatically since the sector was liberalized in the late 1980s. Export restraints like those implemented in Canada's NEP, reduce the amount of capital private companies are willing to invest in exploration and production because it reduces the returns that could otherwise be realized. In fact, this is the case at present in Bangladesh. The pace of industry development is slow, and as the risk of non-payment increases,

[40] Ibid.
[41] The Daily Star.

IOCs will be less willing to invest in further development. Because the government of Bangladesh does not have the resources to maintain development at the current pace, using natural gas to stimulate the economy is not a viable option.

Energy exports could provide revenues for development, continued exploration and construction of infrastructure. However, due to the current inadequate regulation in Bangladesh, many fear that any profits gained from gas exports would be lost due to mismanagement and cronyism. Whether or not the implementation of BERC will help to resolve these issues remains to be seen. Canada's NEB provides an example of a regulatory body that oversees the industry at arms-length from operations, ensuring the maintenance of a competitive market. Such regulatory institutions have also proven beneficial to the gas industries of other developing countries where efficient planning and implementation of policies is a necessary element for increased growth.[42] Increasing regulatory transparency in this way could reduce potential trade barriers and disputes. Efficiency could also be increased through the process of unbundling by separating activities in exploration and production from transmission and distribution. Unbundling would also place Bangladesh in a better position to take advantage of future GATS negotiations on energy services.

The government has assured that under BERC any decisions on concerning the export of natural gas will be made on a commercial basis and not for political reasons. In November 2001, Unocal Corporation, an international oil company with subsidiaries in Bangladesh, submitted a proposal for a gas export pipeline to India. The proposal asserts that the project would benefit Bangladesh by increasing economic growth along the pipeline route, expanding pipeline infrastructure, promote gas exploration, provide employment and training, increase the purchase of local goods and services and improve roadway and telecommunications infrastructures.[43] However, citing the unstable atmosphere that had been created by the war in Iraq, the government of Bangladesh postponed any decision on natural gas exports.

Concerning the environment, although the Kyoto Protocol does not require developing countries to reduce GHG emissions, consideration must still be given to sustainable development whenever possible. At present, the Bangladesh business sector lacks the adequate capital and technology to adequately develop the gas industry but could gain

[42] CSIS, June 2000.
[43] UNOCAL, p. 1.

from technology transfer as a result of increased foreign investment. In addition, the benefits of domestic energy subsidization need to be assessed against its environmental impact.

Finally, the possibility of Bangladesh and neighbouring countries establishing a regional agreement concerning energy trade must be examined. It has been aptly noted elsewhere that: "In order to gainfully exploit the natural gas reserves without disturbing the fabric of national sovereignty of the endowed member country, one has to take an integrated view of markets cutting across national boundaries. This is most applicable to South Asia as the countries with distinct advantages in natural resource endowments do not have the necessary wherewithal, including finance, technology and manpower, to harness these resources."[44] The South Asian Association for Regional Cooperation (SAARC) is currently examining the development of a regional energy framework. The SAARC Technical Committee for Energy is establishing a database of information on the region's energy projects and investment. The SAARC offers a potential forum in which to pursue the creation of a regional energy agreement, increasing regional cooperation in this area.

The global energy market holds many possibilities for Bangladesh and the next few years will prove crucial as decisions are made concerning the development of Bangladesh's energy sector and its economy. The evolution of Canada's energy market provides valuable insights into how concerns of energy use and energy security can successfully be addressed.

[44] Lama, p. 16.

Bibliography

APEC Energy Working Group "Deregulating Energy Markets in APEC." http://www.apecenergy.org.au/welcome/publications/Final_Report.pdf, accessed November 10, 2002.

Center for Policy Dialogue. "Bangladesh Gas Sector Development: Status, Policy Options and Challenges," (Dhaka: Center for Policy Dialogue, 2000) http://www.cpd-bangladesh.org/report24.PDF, accessed November 10, 2002.

Center for Strategic and International Studies. "Bangladesh: Energy and Development – The Lessons of Experience." June, 2000.
http://www.csis.org/saprog/bangladeshExec.html, accessed November 10, 2002.

_____. "Energy in Bangladesh: Step By Step." August, 2000. http://www.csis.org/saporg/sam24.html, accessed November 10, 2002.

The Daily Star, Volume 3 Number 1290, April 28, 2003, Business Page.

Department of Foreign Affairs and International Trade. *Third Annual Report on Canada's State of Trade: Trade Update, May 2002*. Government of Canada, http://www.dfait-maeci.gc.ca/eet/pdf/SOT_2002-en.pdf, accessed November 10, 2002.

Dillon, John. "The Petroleum Industry under Continental Integration," in Ricardo Grinspun and Maxwell A. Cameron (eds.) *The Political Economy of North American Free Trade*. (Montreal-Kingston: McGill-Queen's University Press, 1993), chapter 20.

Dukert, Joseph M. "The Evolution of the North American Energy Market: Implications of Continentalization for a Strategic Sector of the Canadian Economy," *The American Review of Canadian Studies* (Autumn 2000): 349-359.

Energy Information Administration. "Bangladesh Power." January 2001. http://www.bangladeshpower.com/, accessed November 10, 2002.

Energy, Mines and Resources Canada. *The National Energy Program, 1980*, (Ottawa: Supply and Services Canada, 1980).

Lama, Mahendra P. "Economic Reforms and the Energy Sector in South Asia: Scope for Cross-border Power Trade," *South Asian Survey*, Vol. 7, No. 1, January-June 2000, pp. 3-23.

Leyton-Brown, David. "Canadianizing Oil and Gas: The National Energy Program, 1980-83," in Don Munton and John Kirton (eds.). *Canadian Foreign Policy – Selected Cases*. (Scarborough: Prentice-Hall Canada, 1992).

MacLaren, Virginia W. "Redrawing the Canadian Energy Map," in John N.H. Britton (ed.), *Canada and the Global Economy: the geography of structural and technological change*, (Montreal-Kingston: McGill-Queen's University Press), chapter 8.

McDougall, John N. "The Canada-US Free Trade Agreement and Canada's Energy Trade," *Canadian Public Policy*, XVII:1:1-13, 1991.

National Energy Board. http://www.neb.gc.ca/about/history_e.htm#Responsibilities, accessed November 10, 2002.

Natural Resources Canada. *Energy in Canada 2000*, http://www.nrcan.gc.ca/es/ener2000/, accessed November 10, 2002.

Plourde, Andre. "The NEP Meets the FTA," *Canadian Public Policy*, XVII:1:14-24, 1991.

McRae, Robert N. "Energy Trade Without Barriers," in S. J. Randall and H.W. Konrad, *NAFTA In Transition*, (University of Calgary Press, 1995).

Trebilcock, Michael J. and Robert Howse. *The Regulation of International Trade*, 2nd ed., (New York: Routledge, 1999).

UNCTAD. *Trade Agreements, Petroleum and Energy Policies*. (New York and Geneva: UNCTAD, 2000).

UNTAD. *Energy and Environmental Services: Negotiating Objectives and Development Priorities*. (New York and Geneva, 2003).

UNOCAL. *Fact Sheet: Bangladesh Natural Gas Pipeline Project.* www.unocal.com/globalops/b0pipeline/summary.pdf, accessed July 15, 2003.

World Bank. "Undeveloped oil and gas fields in the industrializing world – a description of potential international investment projects for the petroleum industry." Energy Sector Management Assistance Programme Paper, 2001.

WTO. "Council for Trade in Services – Energy Services – Background Note by the Secretariat." S/C/W/52, 1998.

_____. "Council for Trade in Services – Special Session – Communication from Cuba, Negotiating Proposal on Energy Services." S/CSS/W/144

_____. "Council for Trade in Services – Special Session – Communication from European Communities and their Member States – GATS 2000: Energy Services." S/CSS/W/60.

_____. "Council for Trade in Services – Special Session – Communication from Japan, Negotiating Proposal on Energy Services Supplement." S/CSS/W/42/Suppl3.

_____. "Council for Trade in Services – Special Session – Communication from United States, Negotiating Proposal on Energy Services." S/CSS/W/24.

_____. "Council for Trade in Services – Special Session – Communication from Venezuela, Negotiating Proposal on Energy Services." S/CSS/W/69.

_____. “Trade Policy Review Body – Trade Policy Review – Bangladesh – Minutes.” WT/TPR/M/68, 2000.